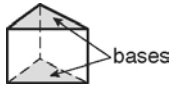
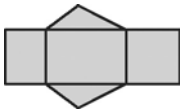
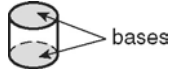
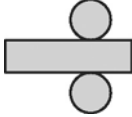

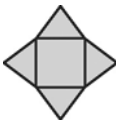
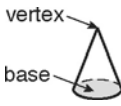



Dear Family,

In this chapter, your child will learn about three-dimensional figures and spatial relationships. Your child will then learn to determine the volumes of these three-dimensional figures.


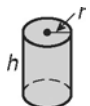

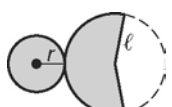
Your child will begin the lesson with a look at solid geometry.

There are four basic three-dimensional figures at which your child will be looking. These are outlined in the table below. Your child will learn more about these figures by using a net. A net is a diagram of a three-dimensional figure that can be folded to form the three-dimensional figure. The nets of these figures are also included in this table.

Shape	Description	Example	Net
Prism	Formed by two parallel congruent polygonal faces called <i>bases</i> connected by faces that are parallelograms		
Cylinder	Formed by two parallel congruent circular bases and a curved surface that connects the bases		
Pyramid	Formed by a polygonal base and triangular faces that meet at a common vertex.		
Cone	Formed by a circular base and a curved surface that connects the base to a vertex.		

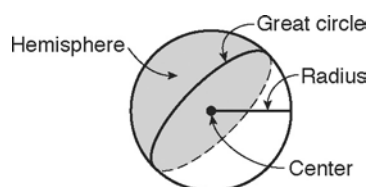
Your child will then move on to determine the volumes of different figures.

The formulas needed to find these volumes are outlined below.

Shape	Example	Volume
Right Prism		$V = Bh$
Right Cylinder		$V = \pi r^2 h$
Right Pyramid		$V = \frac{1}{3} Bh$
Right Cone		$V = \frac{1}{3} \pi r^2 h$

Your child will also learn about the unique shape of spheres. A sphere is the locus of points in space that are a fixed distance from a given point called the center of a sphere. The radius of a sphere connects the center of the sphere to any point on the sphere.

The figure below shows the parts of a labeled sphere.



The volume of a sphere with radius r is

$$V = \frac{4}{3} \pi r^3.$$

The surface area of a sphere with radius r is $S = 4\pi r^2$.

The following are the assignments and the assessments for this unit. As a reminder the actual dates when the assignments are assigned can be found on the [assignment calendar](#) on my [school webpage](#). This can be found under classrooms on the [high school webpage](#).

11 Are You Ready & skills

11-1 Solid Geometry (p 745) 13, 15, 17, 18, 19, 21, 22, 23, 28, 34, 36, 37, 38-44.

11-2 Volume of Prisms and Cylinders (p 754) 13, 15, 16, 17, 19-23, 26, 34, 35, 36.

11-3 Volume of Pyramids and Cones (p 762) 13, 15, 16, 17, 19-23, 34, 39-41.

11-4 Spheres: (p 771) 13, 15, 16, 17, 19-23, 30, 36, 39, 40, 41.

11A Ready to Go On & posttests

Chapter 12 Quiz